Current topics

Eradication of poliomyelitis: progress report

Introduction

In 1988, the World Health Assembly established the goal of eradication of poliomyelitis by the year 2000 (resolution WHA41.28). In October of the same year, the Regional Committee for the Eastern Mediterranean adopted the target for the Region (EM/RC35/R.14). In the following year, a regional plan of action for poliomyelitis eradication was discussed and adopted by the Regional Committee (EM/RC36/R.6). In its 1993, 1994 and 1997 sessions, the Regional Committee reviewed the progress achieved towards poliomyelitis eradication in the Region and adopted further resolutions pursuant to the target.

The Regional Committee resolution EM/RC44/R.11 (1997) emphasized the necessity of continuing national efforts aimed at proper implementation of the strategies for poliomyelitis eradication, namely: maintaining high levels of routine immunization; continuing to implement supplementary immunization activities, particularly national immunization days; supporting epidemiological surveillance for cases of acute flaccid paralysis; and giving increased attention to prevention of cross-border transmission.

The purpose of this report is to provide an update on the status and progress of the poliomyelitis eradication initiative in the Eastern Mediterranean Region, particularly with reference to the 1997 resolution. It also summarizes the remaining constraints facing the goal of poliomyelitis eradication

by 2000 in the Region and the actions needed to overcome the remaining challenges.

Implementation of strategies for poliomyelitis eradication

Achieving and sustaining high levels of routine immunization coverage

Achieving and sustaining high routine immunization coverage of infants with at least three doses of oral polio vaccine (OPV) is given high priority in the Region. In 1998, the regional average for routine coverage remained at nearly the same rate as that of 1997 (around 82%).

Figure 1 shows the immunization coverage rates by country; 17 countries have achieved routine immunization coverage rates of 90% and above. The coverage rates in Afghanistan, Djibouti, Pakistan, Sudan and Republic of Yemen have recently improved; however, they are still much lower than the minimum target coverage of 90%.

In 1998, a comprehensive review of immunization services and poliomyelitis eradication was conducted in Afghanistan by international teams of experts that included WHO and UNICEF staff and representatives of major partners and donors supporting the national programme. It was noted that despite continued civil unrest in Afghanistan, there had been significant progress in improving immunization services and poliomyelitis eradication activities. A similar review was conducted in Pakistan by a team of international experts. These reviews provided detailed recommendations on how to rehabilitate and im-

Figure 1 Coverage rate for OPV3 among children under 1 year, in countries of the Eastern Mediterranean Region, 1998

prove both routine immunization and poliomyelitis eradication activities.

The Regional Office, in consultation with field staff of both WHO and UNICEF, has developed innovative strategies to boost routine immunization of children in countries and areas where long-standing conflicts have destroyed the health infrastructure. These EPI acceleration initiatives are based on using mobile and outreach teams and/or local mass campaigns. This plan is now being implemented in Afghanistan with very good initial results and is under consideration for implementation in Somalia.

As an essential step towards restoring the immunization programme in the Republic of Yemen, WHO assisted the national programme in developing a detailed plan for restoration of the cold chain system in the country. The plan has been fully funded by the Japanese government, and as a result the cold chain system has been extensively restored with additional solar refrigerators installed and staff trained.

National immunization days and other supplementary immunization activities

During 1998, all countries, except Cyprus and Kuwait, conducted national immuniza-

tion days (NIDs). The Regional Office provided technical assistance in all aspects of NID planning, implementation and evaluation, particularly to the programmes in Afghanistan, Iraq, Pakistan, Somalia, Sudan and Republic of Yemen. Significant inputs to this WHO effort were received from partner agencies, especially UNICEF, Rotary International and the Centers for Disease Control and Prevention, Atlanta, USA. This support has been critical to the success of campaigns, particularly in the challenging circumstances faced by countries such as Afghanistan, Pakistan, Somalia, Sudan and Republic of Yemen.

One of the most important developments with respect to NIDs in 1998 is the fact that they were extended to all the remaining parts of the Region where such an activity had not been possible before, namely to all parts of Somalia and to all of southern Sudan.

Surveillance for acute flaccid paralysis

Almost all countries of the Region have established a system of surveillance for acute flaccid paralysis (AFP). However, the quality of these systems in the Region remains variable. Fifteen countries (Bahrain, Cyprus, Egypt, Islamic Republic of Iran, Iraq, Jordan, Kuwait, Lebanon, Libyan Arab Republic, Oman, Palestine, Qatar, Saudi Arabia, Syrian Arab Republic and Tunisia) have successfully achieved or exceeded the minimum required sensitivity for detecting and reporting cases of non-polio AFP (1 case per 100 000 children aged less than 15 years). Morocco is close to achieving this level of sensitivity. AFP surveillance has been initiated in Somalia and south Sudan with encouraging results and is functioning moderately well in Afghanistan and Pakistan but needs significant improvement in Sudan and the

Figure 2 Regional average non-poliomyelitis acute flaccid paralysis rate, Eastern Mediterranean Region, 1993–98 (per 100 000 children under 15 years of age)

Republic of Yemen. The overall regional average rate for non-poliomyelitis AFP was 0.9/100 000 (Figure 2).

A number of review missions were undertaken in 1998 with the aim of strengthening AFP surveillance systems in countries. Although most countries are making progress in clinical and epidemiological investigation of AFP cases, a lot remains to be done to achieve the quality of surveillance required to target efforts and to certify eradication.

Laboratory-based surveillance for wild poliovirus in the Region, the core component of AFP surveillance, also made substantial progress in 1998. Only two of the 12 network laboratories could not be fully accredited during 1998, however training and provision of equipment and supplies has been initiated and it is expected that all network laboratories will be fully accredited by mid-1999. Analysis of the results of the laboratory performance indicators

Figure 3 Distribution of wild poliomyelitis virus types, Eastern Mediterranean Region, 1998

show that, while the target has been achieved for many of them, improvement is still required in the speed of specimen transport to the laboratory and the provision of timely laboratory results.

In 1998, wild polioviruses were detected in seven countries (Figure 3): Afghanistan (Types 1 and 3), Egypt (type 1), Islamic Republic of Iran (Types 1 and 3), Iraq (Type 1), Pakistan (Types 1 and 3), Saudi Arabia (Type 3) and Sudan (Type 1). It should, however, be emphasized that the detection of wild viruses is related to the sensitivity and quality of AFP surveillance and the extent to which adequate samples are referred for analysis to network laboratories. Weak AFP surveillance systems in some countries, such as Djibouti, Somalia, Sudan, United Arab Emirates and Republic of Yemen, may result in under-utilization of network laboratories and underestimation of the extent of wild poliovirus transmission.

Reported poliomyelitis cases

The total number of confirmed cases of poliomyelitis reported from countries of the Region during 1998 was at its lowest level since 1988 despite the improvement in surveillance (Figure 4). The distribution of confirmed poliomyelitis cases between countries of the Region is shown in Figure 5. Of the 550 cases reported in 1998, 339 (62%) were reported from Pakistan, 59 from Afghanistan, 50 from Sudan, 35 from Egypt, 37 from Iraq, 14 from Republic of Yemen and 11 from Somalia. Imported cases were reported from Islamic Republic of Iran (4).

Coordination of efforts in poliomyelitis eradication, particularly in border areas

The Regional Office continued to play a key role in coordinating poliomyelitis eradication activities between countries of the Region through support to regular ex-

Figure 4 Reported poliomyelitis cases, Eastern Mediterranean Region, 1988–98

Figure 5 Poliomyelitis cases, Eastern Mediterranean Region, 1998 ($n = 550$)

change of information, planning and coordination meetings and securing of technical and financial support. Coordination of poliomyelitis eradication activities between neighbouring countries can be divided into

coordination between countries of the Region and coordination between countries of the Eastern Mediterranean Region and neighbouring countries from other regions.

Within the Eastern Mediterranean Region, coordination of poliomyelitis eradication efforts is being achieved through regular contact with all the authorities concerned with respect to planning and coordinated NIDs, rapid exchange of AFP surveillance data and proper and comprehensive epidemiological investigation of cases, including testing for viral sequencing of isolates.

To this effect, neighbouring countries are conducting NIDs at the same time to enhance the impact of these campaigns, for example such timing takes place between Maghreb countries and countries of the Gulf Cooperation Council. Where the most suitable dates for NIDs are not the same for neighbouring countries and where cross-border transmission is important, neighbouring countries are conducting sub-national immunization days involving border provinces at the same time that the neighbour is conducting the NID. This has been the case between Afghanistan, Islamic Republic of Iran and Pakistan and among countries bordering northern Iraq.

Rapid exchange of AFP and virological surveillance data is now achieved through *Polio fax* which has been issued regularly by the Regional Office for the past 6 years, for the past year on a weekly basis. In addition, detailed epidemiological information about all cases of poliomyelitis reported from border areas of any country is made available to neighbouring countries as soon as data are available and further reconsidered upon receipt of viral sequencing of isolates. The latter has been instrumental to proper understanding of poliovirus circulation, particularly in identifying possible ways by which cross-border transmission is occurring.

Coordination of poliomyelitis eradication efforts, particularly in border areas,

has been actively pursued with the neighbouring regions of the Eastern Mediterranean Region. Operation MECACAR for the Middle East, Caucasus and Central Asian Republics is one example of such coordination between the Eastern Mediterranean and the European regions, where dates of NIDs are coordinated between eight countries of the Eastern Mediterranean Region and 12 of the European region. Also, border area coordination is carried out between countries of the two regions bordering northern Iraq.

Similar activities are under way between the Eastern Mediterranean Region and the African Region, particularly as relates to countries of the Horn of Africa, and similar efforts are being undertaken with neighbouring countries of the South-East Asia Region, especially in coordinating dates of NIDs between countries of the South Asian Association for Regional Cooperation.

Certification of poliomyelitis eradication

According to the recommendations of the Regional Commission for Certification of Poliomyelitis Eradication most countries have now established national certification committees. The Regional Office continues to encourage formation of these national committees in the countries that have not yet formed them and to ensure appropriate membership of each committee. Detailed plans of action for regional certification and guidelines for certification activities in countries have been developed and approved by the Regional Commission. In addition, a manual of operations has been prepared which has been endorsed by the Commission. The manual is designed to assist the national programmes in providing the standardized documentation necessary

for certification and to facilitate review and validation by national committees and preparation of country reports for submission to the Commission. Visits of the Regional Certification Commission Members to the countries of the Region to review the status of the certification activities and relevant documentation have been initiated. It is expected that in 1999 the RCC will begin reviewing the reports for certification of poliomyelitis eradication submitted by the national committees from individual countries.

Regional and global partnership including fund-raising

Countries of the Eastern Mediterranean Region remain committed to poliomyelitis eradication, and have continued large-scale eradication activities in close collaboration with the Regional Office. The largest share of the cost of human and financial resources for eradication efforts in the Region is provided by the countries themselves. The Regional Office continues to make major efforts to maintain and increase national inputs. It is very satisfying to note the commitment and input of countries in difficult economic situations for national poliomyelitis eradication efforts.

At the same time, the Regional Office continued its efforts at fund-raising from within the Region in support of poliomyelitis eradication but with very little success so far. To promote this effort, a senior staff member has recently been appointed with the main duties of fund-raising for priority programmes of the Region, which include poliomyelitis.

The Regional Office further strengthened its partnership with international agencies and governments supporting poliomyelitis eradication globally, particularly Rotary International, CDC, the United

States Agency for International Development (USAID) and the governments of Canada, Japan and the United Kingdom. Some of the funds raised were channelled through the Regional Office and some as bilateral support from the donor to the country concerned. During the 2 years that have passed since resolution EM/RC44/R.11, over US\$ 12 million have been pledged by partner agencies to support the Regional Office's efforts for poliomyelitis eradication in selected countries and for the coordination of regional activities. In addition, several experts were offered by CDC in support of poliomyelitis eradication efforts in the Region. The Regional Office has also played a key role in facilitating significant bilateral support to countries, and in raising funds for purchase of OPV through UNICEF to several countries. However, in order to meet the requirements of poliomyelitis eradication, particularly in countries facing special circumstances such as Afghanistan, Somalia and Sudan, and to maintain the momentum created to achieve poliomyelitis eradication on time, more resources are required.

Remaining challenges

Although the progress towards poliomyelitis eradication in the Region was impressive during 1998, significant obstacles remain that must be overcome in order to achieve poliomyelitis eradication by 2000. This is particularly so among countries of the Region affected by war and civil strife. These countries pose a unique challenge to the eradication effort and require extraordinary human and financial resources and multi-agency coordination for effective implementation of the poliomyelitis eradication strategies. The main challenges facing eradication of poliomyelitis from the Region are as follows.

- War and civil strife continue in a number of countries. It is therefore essential to secure peace or at least periods of tranquillity in order to allow free access to every corner of these countries in order to implement the basic poliomyelitis eradication strategies.

Routine immunization coverage is low and AFP surveillance is weak in some countries, particularly among high-risk groups in densely populated areas and among mobile, refugee and displaced population groups.

- Political commitment from the highest levels in governments and international agencies is not always translated into effective action at the level of implementation.

It remains to be emphasized that poliomyelitis eradication efforts have now entered their final and most difficult phase,

which will require a concerted effort from all governments, international partners and UN agencies to ensure access to areas that are difficult to reach and availability of human and financial resources in order to achieve the target.

During the last meeting of the Inter-agency Coordinating Committee for poliomyelitis eradication, the regional plan and budget requirements to achieve poliomyelitis eradication from the Region were discussed. The plan received the endorsement of all partners who were present and some pledges in support of the plan were made. However, a large part the plan remains unfunded and it is very much hoped that this shortfall will be met from funds raised from within the Region.

Source: WHO Regional Office for the Eastern Mediterranean, Document EM/RC46/INF.Doc.4, June 1999